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2 ; Search time 39 Seconds

1937.259 Million cell updates/sec

Sequence: 1 MESSKKMDAGTLPNPPLK.....IKDDTIFIKVIYDTSLLPDP 567

Searched: 908470 segs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Post-processing: Minimum Match 0%

Listing first 45 summaries

Database : A_Geneseq_101002:*

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| 2: | /SID2/gcgdata/genseq/genseqp-emb1/AA1981. DAT * |
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| 4: | /SID2/gcgdata/genseq/genseqp-emb1/AA1983. DAT * |
| 5: | /SID2/gcgdata/genseq/genseqp-emb1/AA1984. DAT * |
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| 11: | /SID2/gcgdata/genseq/genseqp-emb1/AA1990. DAT * |
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| 22: | /SID2/gcgdata/genseq/genseqp-emb1/AA2001. DAT * |
| 23: | /SID2/gcgdata/genseq/genseqp-emb1/AA2002. DAT * |

Pred. NO. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | DB | ID | Description |
|------------|--------|-------------|--------|----|-----------|----------------------|
| 1 | 2994 | 100.0 | 567 | 23 | AA017756 | Murine CD40 receptor |
| 2 | 2974 | 99.3 | 567 | 23 | ABB57054 | Mouse ischaemic co |
| 3 | 2886.5 | 96.4 | 568 | 18 | AAW27431 | Human CRAF1-a (TR |
| 4 | 2886.5 | 96.4 | 568 | 21 | AAV98166 | Human TRAF3 protei |
| 5 | 2886.5 | 96.4 | 568 | 23 | AA017757 | Human CD40 recepto |
| 6 | 2886.5 | 96.4 | 690 | 18 | AAW27428 | Human CRAF1-b (TR |
| 7 | 2880.5 | 96.2 | 568 | 17 | AAW03146 | Human CRAF1-b (TR |
| 8 | 2859 | 95.5 | 567 | 22 | AAAB67615 | ILMP1 associated p |
| 9 | 2849 | 95.2 | 567 | 17 | AAAR99259 | Amino acid sequenc |
| 10 | 2726 | 91.0 | 543 | 18 | AAW27432 | Full-length CD40 b |
| | | | | | | Human CRAF1 isofo |

| | | | | | | |
|----|--------|------|-----|----|-----------|---------------------|
| 11 | 2726 | 91.0 | 665 | 18 | AAW27433 | Human CRAFT-b iso6 |
| 12 | 2710 | 90.5 | 553 | 17 | AAAP8883 | CD40 associated pr |
| 13 | 2558.5 | 85.5 | 516 | 18 | AAW27436 | Human CRAFT-b iso6 |
| 14 | 2558.5 | 85.5 | 638 | 18 | AAW27437 | Human CRAFT-b iso6 |
| 15 | 2552.5 | 85.3 | 512 | 18 | AAW27434 | Human CRAFT-b iso6 |
| 16 | 2399.5 | 85.3 | 634 | 18 | AAW27435 | Human CRAFT-b iso6 |
| 17 | 2397.5 | 80.1 | 472 | 17 | AAAP88835 | CD40 associated pr |
| 18 | 2102.5 | 70.2 | 438 | 21 | AAAB15721 | Delta1221 TRAF-3 de |
| 19 | 1613 | 53.9 | 347 | 21 | AAAB15722 | Delta1221 TRAF-3 de |
| 20 | 1381 | 46.1 | 282 | 21 | AAAT79565 | Human TRAF3 delta- |
| 21 | 1243 | 41.5 | 558 | 18 | AAW29609 | Murine TRAF5, a no |
| 22 | 11843 | 41.5 | 558 | 18 | AAW29237 | Murine TRAF5, a no |
| 23 | 1189.5 | 39.7 | 557 | 18 | AAW27610 | Human TRAF5, a no |
| 24 | 1189.5 | 39.7 | 557 | 18 | AAW29258 | Human TRAF5, a no |
| 25 | 1189.5 | 39.7 | 557 | 18 | AAAT8168 | Human TRAF5, a no |
| 26 | 1108 | 37.0 | 228 | 21 | AAAB07003 | Human TRAF3 protein |
| 27 | 953 | 31.8 | 181 | 17 | AAAP88834 | Human TRAF2(NC)-CA |
| 28 | 842 | 28.1 | 155 | 23 | AAO17782 | CD40 associated pr |
| 29 | 837.5 | 28.0 | 501 | 23 | ABBS7335 | CD40 receptor-asso |
| 30 | 836.5 | 27.9 | 501 | 23 | ABBS7335 | Mouse ischemic co |
| 31 | 831 | 27.8 | 157 | 17 | AAAR0578 | Mouse TRAF2, Mus |
| 32 | 745.5 | 24.9 | 501 | 21 | AAAR8836 | CD40 associated pr |
| 33 | 745.5 | 24.9 | 501 | 21 | AAAT8165 | Human TRAF2 protein |
| 34 | 730 | 24.4 | 422 | 22 | AAAT11901 | Human TNF-receptor |
| 35 | 641.5 | 21.4 | 416 | 17 | AAAO3147 | Human TRAF2 splice |
| 36 | 641.5 | 21.4 | 416 | 17 | AAAT8164 | Ershein-Bar1 induc |
| 37 | 640 | 21.4 | 406 | 17 | AAAT8164 | Human TRAF1 protein |
| 38 | 596.5 | 19.9 | 336 | 22 | AAAT9057 | Mouse TRAF1, Mus |
| 39 | 568.5 | 19.0 | 417 | 21 | AAAT87765 | Human TRAF2TR var1 |
| 40 | 556.5 | 18.6 | 470 | 18 | AAAT87765 | Human TNFR AF1 C1 |
| 41 | 553.5 | 18.5 | 240 | 21 | AAAT8167 | Human CARD1, Homo |
| 42 | 548.5 | 18.3 | 473 | 21 | AAAB07002 | Human TRAF4 protein |
| 43 | 548 | 18.3 | 522 | 18 | AAAT2113 | Human TRAF2(NC)-CA |
| 44 | 548 | 18.3 | 522 | 18 | AAAT2113 | Tumour necrosis fa |
| 45 | 548 | 18.3 | 522 | 18 | AAAT98189 | Human TRAF6 protein |
| 46 | 548 | 18.3 | 522 | 23 | AAAT98189 | Human TRAF6 (TNF r |

ALIGNMENTS

| XX | RESULT 1 |
|----------|---|
| AA017756 | AA017756 standard; protein; 567 AA. |
| XX | |
| AC | AA017756; |
| XX | |
| DT | 15-AUG-2002 (first entry) |
| XX | |
| DE | Murine CD40 receptor-associated factor 1 (CRAF1). |
| XX | |
| XX | Mouse; CD40 receptor-associated factor 1; CRAFT; organ rejection; |
| XX | autoimmune disease; apoptosis; infection; fibrosis; liver disease; |
| XX | kidney disease; vascular disease; gastrointestinal disease; vasotropic; |
| XX | immunosuppressive; anti-inflammatory; nephrotic; anti-allergic; |
| XX | anti-naemic; anti-thyroid; antirheumatic; antiarthritic; cardiac; |
| XX | dermatological; haemostatic; antidiabetic; antihypertensive; |
| XX | antipneumonic; bladder disease; human herpesvirus 4; Epstein-Barr virus |
| OS | Mus sp. |
| XX | |
| PN | US2002031522-A1. |
| XX | |
| PD | 14-MAR-2002. |
| XX | |
| FE | 10-MAR-1997; 97US-0813323. |
| XX | |
| PR | 11-MAR-1996; 96US-013199P. |
| XX | |
| XX | |
| PA | (BALF/) BALTIMORE D. |
| PA | (CHEN/) CHENG G. |
| PA | (YEZ/) YE Z. |
| PA | (LEDE/) LEDERMAN S. |
| PA | (CLEA/) CLEARY A. |

XX PI Baltimore D, Cheng G, Ye Z, Lederman S, Cleary A;
 XX DR WPI; 2002-451449/48.
 XX DR N-PSDB; AAL46792.
 XX PT New CD40 receptor-associated factor 1 capable of inhibiting
 PT CD40-mediated cell activation, useful for treating e.g. inflammatory
 PT diseases, autoimmune diseases, allergic reaction, or organ transplant
 PT rejection
 PS Disclosure; Fig 1; 31pp; English.
 XX CC The present invention relates to a protein comprising a CD40 receptor-
 CC associated factor 1 (CRAF1) truncated by about 323 - 414 amino acid
 CC residues at the amino terminus, or its variant, which is capable of
 CC inhibiting CD40-mediated cell activation. The protein is useful for
 CC treating a condition characterised by an aberrant or unwanted level of
 CC CD40-mediated intracellular signaling, such as: organ rejection,
 CC autoimmune diseases such as rheumatoid arthritis, myasthenia gravis,
 CC systemic lupus erythematosus, Grave's disease, idiopathic
 CC thrombocytopenia purpura, haemolytic anaemia, or diabetes mellitus, an
 CC allergic response (e.g. hay fever or a penicillin allergy), a condition
 CC dependant on CD40 ligand-induced activation of fibroblast cells (e.g.
 CC arthritis, scleroderma, or fibrosis), a condition dependant on CD40
 CC ligand-induced activation of endothelial cells (e.g. atherosclerosis,
 CC reperfusion injury, allograft rejection, organ rejection, or chronic
 CC inflammatory autoimmune diseases, a condition dependant on CD40
 CC ligand-induced activation of epithelial cell, specifically keratinocytes
 CC (e.g. psoriasis), or an inflammatory kidney disease (e.g. membranous
 CC glomerulonephritis, minimal change disease/acute tubular necrosis, pauci-
 CC immune glomerulonephritis, or focal segmental glomerulosclerosis). The
 CC present sequence is the murine CRAF1 protein.
 XX SQ Sequence 567 AA:
 Query Match 100.0%; Score 2994; DB 23; Length 567;
 Best Local Similarity 100.0%; Pred. No. 5e-241;
 Matches 567; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 MESSKKMDAAGTLQPPPLKLPDRGAGSVLPBEGGKKEKVEKVEKCKRCLVLC 60
 DB 1 MESSKKMDAAGTLQPPPLKLPDRGAGSVLPBEGGKKEKVEKVEKCKRCLVLC 60
 QY 61 NPKOTEGHGFSCMAALLSSSPKCTACQESIIKDKYFKDNCKCKREILALQVYRNES 120
 DB 61 NPKOTEGHGFSCMAALLSSSPKCTACQESIIKDKYFKDNCKCKREILALQVYRNES 120
 QY 121 RGAEOQLTLGLHLVHLNECOFELPLRADCKEKLKDLRHVEKACKYREATCSHCK 180
 DB 121 RGAEOQLTLGLHLVHLNECOFELPLRADCKEKLKDLRHVEKACKYREATCSHCK 180
 QY 121 RGAEOQLTLGLHLVHLNECOFELPLRADCKEKLKDLRHVEKACKYREATCSHCK 180
 DB 121 RGAEOQLTLGLHLVHLNECOFELPLRADCKEKLKDLRHVEKACKYREATCSHCK 180
 QY 181 SQVPMIKLOKHEDTDCPCVAVSCPHKCSVOTLLRSELNHLSECVAHPSTCSKRRIGCVF 240
 DB 181 SQVPMIKLOKHEDTDCPCVAVSCPHKCSVOTLLRSELNHLSECVAHPSTCSKRRIGCVF 240
 QY 181 SQVPMIKLOKHEDTDCPCVAVSCPHKCSVOTLLRSELNHLSECVAHPSTCSKRRIGCVF 240
 DB 181 SQVPMIKLOKHEDTDCPCVAVSCPHKCSVOTLLRSELNHLSECVAHPSTCSKRRIGCVF 240
 QY 241 OGTMQOIKAHASAVOHVHLKEMSNLSKVKYSLQNEVEYKNSIOSAHNIGCSFEIE 300
 DB 241 OGTMQOIKAHASAVOHVHLKEMSNLSKVKYSLQNEVEYKNSIOSAHNIGCSFEIE 300
 QY 241 OGTMQOIKAHASAVOHVHLKEMSNLSKVKYSLQNEVEYKNSIOSAHNIGCSFEIE 300
 DB 241 OGTMQOIKAHASAVOHVHLKEMSNLSKVKYSLQNEVEYKNSIOSAHNIGCSFEIE 300
 QY 301 IEROKEMLRNNSKILHLQVYDSQAELKELDKELRPFRONMEADSMKSSVESLQNRV 360
 DB 301 IEROKEMLRNNSKILHLQVYDSQAELKELDKELRPFRONMEADSMKSSVESLQNRV 360
 QY 361 TELESVKSAGQARNTGLLESQLSRHDQTLVSHDITLAMDILRFQVLETFASVNGVLIWK 420
 DB 361 TELESVKSAGQARNTGLLESQLSRHDQTLVSHDITLAMDILRFQVLETFASVNGVLIWK 420
 QY 421 IRDKRRKROEAVMGKTSLSQPFYTGFGKMCARVYLANGDGKGTHTSLFVVIIRGE 480
 DB 421 IRDKRRKROEAVMGKTSLSQPFYTGFGKMCARVYLANGDGKGTHTSLFVVIIRGE 480
 QY 481 YDALLPWFKOKVTLMLMDQSSRRHLGDAFPPDNSSSFKKPTGEMNIASGCPVFAQT 540
 DB 481 YDALLPWFKOKVTLMLMDQSSRRHLGDAFPPDNSSSFKKPTGEMNIASGCPVFAQT 540

DB 481 YDALLPWFKOKVTLMLMDQSSRRHLGDAFPPDNSSSFKKPTGEMNIASGCPVFAQT 540
 QY 541 VLENGTYIKDDTIFIKYIVDTSDLPDP 567
 DB 541 VLENGTYIKDDTIFIKYIVDTSDLPDP 567
 RESULT 2
 ID ABB57054 standard; Protein: 567 AA.
 AC ABB57054;
 DT 07-MAR-2002 (first entry)
 DE Mouse ischaemic condition related protein sequence SEQ ID NO:98.
 DE Mouse ischaemic condition related protein sequence SEQ ID NO:98.
 KW Mouse; ischaemia; compressive ischaemia; occlusive ischaemia;
 KW vasospastic ischaemia; ischaemic condition; ischaemic disease.
 OS Mus musculus.
 PN WO200188188-A2.
 XX 22-NOV-2001.
 XX 18-MAY-2001; 2001WO-JP04192.
 PF 18-MAY-2001; 2000JP-0145977.
 PR 18-MAY-2001; 2000JP-0145977.
 PA (UNIV) UNIV NIHON SCHOOL JURIDICAL PERSON.
 PI Ishikawa K, Asai S, Takahashi Y, Nagata T, Ishii Y;
 DR WPI; 2002-034733/04.
 DR N-PSDB; AB199264.
 XX Examining the ischemic condition (e.g. occlusive ischemia) by measuring
 PT expression levels of particular genes defined in the specification or
 PT by determining the expression profile of a gene group comprising these
 PT genes -
 PS Claim 2; Page 297-300; 2690pp; English.
 CC The present invention describes a method for examining ischaemic
 CC conditions, comprising measuring the expression levels of particular
 CC genes (I) in a test sample or determining the expression profile of a
 CC gene group in the sample comprising genes selected from (I). The method
 CC is useful for examining the ischaemic condition (e.g. compressive
 CC ischaemia, occlusive ischaemia or vasospastic ischaemia) by measuring
 CC expression levels of particular genes (AB199202 to AB199912, encoding
 CC the protein sequences in ABB57020 to ABB57374) or by determining the
 CC expression profile of a gene group comprising these genes. The
 CC expression levels or expression profiles produced by these genes are
 CC used as an indicator when screening for ischaemic condition improving
 CC drugs or therapeutics for ischaemic diseases. AB199913 and AB199914
 CC represent PCR primers for a mouse ischaemic condition related sequence,
 CC which are used in the exemplification of the present invention.
 XX SQ Sequence 567 AA:
 Query Match 99.3%; Score 2974; DB 23; Length 567;
 Best Local Similarity 99.5%; Pred. No. 2.3e-239;
 Matches 564; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
 QY 1 MESSKKMDAAGTLQPPPLKLPDRGAGSVLPBEGGKKEKVEKVEKCKRCLVLC 60
 DB 1 MESSKKMDAAGTLQPPPLKLPDRGAGSVLPBEGGKKEKVEKVEKCKRCLVLC 60
 QY 61 NPKOTEGHGFSCMAALLSSSPKCTACQESIIKDKYFKDNCKCKREILALQVYRNES 120
 DB 61 NPKOTEGHGFSCMAALLSSSPKCTACQESIIKDKYFKDNCKCKREILALQVYRNES 120

QY 121 RGAEGQLTLGLHLVHLNKECOFELPCLRADCKEKLRLKDLRPHVEKACKYREATCSHCK 180
 DB 121 RGAEGQLTLGLHLVHLNKECOFELPCLRADCKEKLRLKDLRPHVEKACKYREATCSHCK 180
 QY 181 SOYPMITKLOHEHEDTDCPCVVVSCPHKCSVOTLLRSELSEHLSVCVNAPTCSFKRYGCVF 240
 DB 181 SOYPMITKLOHEHEDTDCPCVVVSCPHKCSVOTLLRSELSEHLSVCVNAPTCSFKRYGCVF 240
 QY 241 QGNNQIKAEHASSAVOHVNLKEMSNSEKKVSLLONESVEKNKSIQSLHNDICSEFIE 300
 DB 241 QGNNQIKAEHASSAVOHVNLKEMSNSEKKVSLLONESVEKNKSIQSLHNDICSEFIE 300
 QY 301 IEROKEMLRNNESEKILHLORVIDSOAEKLELDEKIRPRONNEEADSKSSVESIQNRY 360
 DB 301 IEROKEMLRNNESEKILHLORVIDSOAEKLELDEKIRPRONNEEADSKSSVESIQNRY 360
 QY 361 TELESYDKSAGQARNTGLESLSRHQDTLSVHDIRLADMOLRFQVLETASTYNGVLIWK 420
 DB 361 TELESYDKSAGQARNTGLESLSRHQDTLSVHDIRLADMOLRFQVLETASTYNGVLIWK 420
 QY 421 IRDYKRRKQEAVMGKTLSTYSOPEYGYGYKMCARVYLNGDMGKGTLSLFFVIMRGE 480
 DB 421 IRDYKRRKQEAVMGKTLSTYSOPEYGYGYKMCARVYLNGDMGKGTLSLFFVIMRGE 480
 QY 481 YDALLPMPFKQKVTLLMLMDQSSRRHLGDAFRPDNSSFRRPTGEMNIASGCPVFAQT 540
 DB 481 YDALLPMPFKQKVTLLMLMDQSSRRHLGDAFRPDNSSFRRPTGEMNIASGCPVFAQT 540
 QY 541 VLENGTYIIDDTIFIVYDTSDDPP 567
 DB 541 VLENGTYIIDDTIFIVYDTSDDPP 567

RESULT 3
 AAM27431
 ID AAM27431 standard: Protein: 568 AA.

AC AAM27431:
 DT 27-MAR-1998 (first entry)
 DE Human CRAF1-a (TRAF-3-p55) polypeptide.

KM CD40 receptor associated factor 1; CRAF1-a; TRAF-3; p55; human;
 KM CD40 mediated intracellular signalling; organ rejection; allergy;
 KM hay fever; autoimmune disease; systemic lupus erythematosus;
 KM rheumatoid arthritis; myasthenia gravis; Graves' disease;
 KM idiopathic thrombocytopenia purpura; hemolytic anaemia;
 KM diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome;
 KM apoptosis; Kletter's syndrome; spondyloarthritis; Lyme disease; HIV;
 KM syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;
 KM pneumoconiosis; adult respiratory distress syndrome; pneumonitis;
 KM asbestosis; silicosis; Farmer's lung; hepatitis; cirrhosis;
 KM atherosclerosis; multiple sclerosis; glomerulonephritis;
 KM glomerulocystitis; glomerulopathy; kidney disease; nephropathy;
 KM endocarditis; leprosy; malaria; Goodpasture's disease;
 KM Henoch-Schoenlein purpura; polyarteritis; multiple myeloma;
 KM Wegener's granulomatosis; cryoglobulinemia;
 KM Waldenstrom's macroglobulinemia; amyloidosis; Sjogren's syndrome;
 KM AIDS; oesophageal dysmotility; inflammatory bowel disease;
 KM bladder disease; Epstein-Barr virus; mononucleosis; B cell tumour;
 KM Burkitt's lymphoma; nasopharyngeal carcinoma; pneumonia;
 KM gene therapy; diagnosis.

XX Homo sapiens.

OS Key
 XX Location/Qualifiers
 FT 117..141
 FT Region

FT /note= "zinc finger 1 (Zn binding to Cys-117,
 Cys-124, His-136 and Cys-141)."
 FT 148..170
 FT Region
 FT /note= "zinc finger 2 (zinc binding to Cys-148,

FT Cys-153, His-165 and Cys-170"
 FT Region
 FT 177..197
 FT /note= "zinc finger 3 (Zn binding to Cys-177,
 Cys-180, His-192 and Cys-197."
 FT Region
 FT 204..225
 FT /note= "zinc finger 4 (Zn binding to Cys-204,
 Cys-208, His-221 and Cys-225)."
 FT Region
 FT 232..259
 FT /note= "zinc finger 5 (Zn binding to Cys-232,
 Cys-239, His-251 and 259-381"
 FT WO9734473-A1.
 XX 25-SEP-1997.
 XX 21-MAR-1997; 97WO-US05076.
 XX 18-SEP-1996; 96US-0026584.
 XX 21-MAR-1996; 96US-0013820.
 XX 01-MAY-1996; 96US-0016626.
 XX 01-MAY-1996; 96US-0016659.
 XX (UYCO) UNIV COLUMBIA NEW YORK.
 XX Cleary AM, Frank DM, Lederman S;
 XX WPI: 1997-479907/44.
 XX N-PSDB: AAT90123.

PT Protein comprising CRAF1-B domain capable of inhibiting CD40
 PT mediated cell activation - useful to treat conditions characterised
 PT by aberrant or unwanted level of CD40 mediated intracellular
 PT signalling

Example 1; Fig 1D-O; 158bp; English.

XX This polypeptide comprises a CRAF1 (TRAF-3) protein designated
 XX CRAF1-a or TRAF-3-p55, p55, CRAF1(p55), TRAF-3(p55) or CRAF1(p60).
 XX It is encoded by exons 4-13 of the human CRAF gene (see AAT90123).
 XX CRAF1-a is a signalling protein that interacts with the cytoplasmic
 XX tail of B cell surface molecule CD40 and mediates a variety of
 XX T-dependent effects on B cell activation and differentiation. A
 XX higher mol.wt. CRAF1, designated CRAF1b (see AAM27428), has also
 XX been identified, as well as isoforms p5 (see AAM27429), p15 (see
 XX AAM27430) and variants of CRAF1-a and CRAF-b (see AAM27432-37) that
 XX comprise different combinations of zinc fingers. CRAF1 peptides,
 XX comprising from 0-4 zinc finger domains, and nucleic acids encoding
 XX them, can be used to inhibit CD40 ligand activation of cells that
 XX express CD40 on their surface, particularly by introducing the
 XX nucleic acid molecule into the cells, useful to treat conditions
 XX characterised by an aberrant or unwanted level of CD40 mediated
 XX intracellular signalling, such as organ rejection, or a CD40
 XX dependent immune response in a subject receiving gene therapy. The
 XX condition may be an allergic response or an autoimmune response, or
 XX may be dependent on CD40 ligand-induced activation of epithelial
 XX cells, an inflammatory kidney disease, a smooth muscle cell-
 XX dependent disease, or a condition associated with Epstein-Barr
 XX virus.

CC Sequence 568 AA:

Query Match 96.4%; Score 2886.5; DB 18; Length 568;
 Best Local Similarity 96.1%; Pred. No. 4.7e-232;
 Matches 546; Conservative 7; Mismatches 14; Indels 1; Gaps 1;

QY 1 MESSKKDAAGTIQPNPPLKLPDRGAGS-VLVEEGGKYEKFKVTEDEKCKECRLVL 59
 DB 1 MESSKKMDSPGALQTNPLTLHTDRSAGTPVFVEEGGKYEKFKVTEDEKCKECRLVL 60
 QY 60 CNPKOTFCGHRFCESCAALSSSPKCTACQSEIITKDVFKNCKCKRETLAQQVCRNE 119
 DB 61 CSPKOTFCGHRFCESCAALSSSPKCTACQSEIIVKDFKDNCKCKRETLAQQVCRNE 120

XX DE Human CD40 receptor-associated factor 1 (CRAF1).

XX KW Human; CD40 receptor-associated factor 1; CRAF1; organ rejection;

XX KW autoimmune disease; apoptosis; infection; fibrosis; liver disease;

XX KW kidney disease; vascular disease; gastrointestinal disease; vasculitic;

XX KW immunosuppressive; anti-inflammatory; nephrotic; anti-allergic;

XX KW anti-neoplastic; anti-thyroid; anti-rheumatic; anti-arthritic; cardiac;

XX KW dermatological; haemostatic; anti-diabetic; anti-arteriosclerotic;

XX KW antiproliferative; bladder disease; human herpesvirus 4; Epstein-Barr virus.

XX OS Homo sapiens.

XX PN US2002031522-A1.

XX PD 14-MAR-2002.

XX PF 10-MAR-1997; 97US-0813323.

XX PR 11-MAR-1996; 96US-013199P.

XX PA (BALT/) BALTIMORE D.

XX PA (CHEN/) CHENG G.

XX PA (YEZ/) YE Z.

XX PA (LEDER/) LEDERMAN S.

XX PA (CLEA/) CLEARY A.

XX PI Baltimore D, Cheng G, Ye Z, Lederman S, Cleary A;

XX DR WPI: 2002-451449/48.

XX DR N-PSDB: AAL46793.

XX PT New CD40 receptor-associated factor 1 capable of inhibiting

XX PT CD40-mediated cell activation, useful for treating e.g. inflammatory

XX PT diseases, autoimmune diseases, allergic reaction, or organ transplant

XX PT rejection

XX PS Disclosure; Fig 1; 31pp; English.

XX CC The present invention relates to a protein comprising a CD40 receptor-

XX CC associated factor 1 (CRAF1) truncated by about 323 - 414 amino acid

XX CC residues at the amino terminus, or its variant, which is capable of

XX CC inhibiting CD40-mediated cell activation. The protein is useful for

XX CC treating a condition characterised by an aberrant or unwanted level of

XX CC CD40-mediated intracellular signalling, such as: organ rejection,

XX CC autoimmune diseases such as rheumatoid arthritis, myasthenia gravis,

XX CC systemic lupus erythematosus, Grave's disease, idiopathic

XX CC thrombocytopenia purpura, haemolytic anaemia, or diabetes mellitus, an

XX CC allergic response (e.g. hay fever or a penicillin allergy), a condition

XX CC dependent on CD40 ligand-induced activation of fibroblast cells (e.g.

XX CC arthritis, scleroderma, or fibrosis), a condition dependent on CD40-

XX CC ligand-induced activation of endothelial cells (e.g. atherosclerosis,

XX CC reperfusion injury, allograft rejection, organ rejection, or chronic

XX CC inflammatory autoimmune diseases, a condition dependent on CD40

XX CC ligand-induced activation of epithelial cell, specifically keratinocytes

XX CC (e.g. psoriasis), or an inflammatory kidney disease (e.g. membranous

XX CC glomerulonephritis, minimal change disease/acute tubular necrosis, pauci-

XX CC immune glomerulonephritis, or focal segmental glomerulosclerosis). The

XX CC present sequence is the human CRAF1 protein.

XX SQ Sequence 568 AA:

Query Match 96.4%; Score 2886.5; DB 23; Length 568;

Best Local Similarity 96.1%; Pred. No. 4.7e-232;

Matches 546; Conservative 7; Mismatches 14; Indels 1; Gaps 1;

OY 1 MESSKMDAAGTLQNPPLKLOPDRGAGS-VLVPEGGYKFKVKTVEDKYCEKCRVLV 59

DB 1 MESSKMDSPGALQTPPLKLTDRSAGTPVPEGGYKFKVKTVEDKYCEKCHVLV 60

OY 60 CNKQTECGHRCESCMALLSSSPKCAQCESTIKDKVDFDNCKRRLILLOYCCRE 119

DB 61 CSPKQTECGHRCESCMALLSSSPKCAQCESTIKDKVDFDNCKRRLILLOYCCRE 120

OY 120 GRGAEQTLTGLHLVHLKNEQFELPCLRADCKEKYLRKDLRHYEKACKYREATCSHC 179

DB 121 SRGAEQTLTGLHLVHLKNDCHFEELPCVRPDCREKYLKRLRHYEKACKYREATCSHC 180

OY 180 KSOVMKILQHEPDCCVAVSPCHKSVOTLLRSELSAHLSCVNAFSTCSFKRGCV 239

DB 181 KSOVMKILQHEPDCCVAVSPCHKSVOTLLRSELSAHLSCVNAFSTCSFKRGCV 240

OY 240 FQGTMOQIKAHBASAVQHVNLKEMWSNLEKYSLLQNESVEKNKSISQSLHNDICFPEI 299

DB 241 FQGTMOQIKAHBASAVQHVNLKEMWSNLEKYSLLQNESVEKNKSISQSLHNDICFPEI 300

OY 300 EIERKEMLRNNESKILHLQVIVDSQAELKLEDEKREPRFQNNNEADSMKSSVESIQNR 359

DB 301 EIERKEMLRNNESKILHLQVIVDSQAELKLEDEKREPRFQNNNEADSMKSSVESIQNR 360

OY 360 VTELESYVKSAGQARNTGLLESQSRHDQTLVSHDRILADMDLRFQVLETAASYNGVLIW 419

DB 361 VTELESYVKSAGQARNTGLLESQSRHDQTLVSHDRILADMDLRFQVLETAASYNGVLIW 420

OY 420 KIRDKRRKQBAVNGKTLISYQEPYTGFGYKMCARVYLNGDMGKTHLSLFFVIMRG 479

DB 421 KIRDKRRKQBAVNGKTLISYQEPYTGFGYKMCARVYLNGDMGKTHLSLFFVIMRG 480

OY 480 EYDALPMPFKQKVTLMMDGSSRRHGDAPFKDPNSSFKKRTGEMNIAAGCPVVAQ 539

DB 481 EYDALPMPFKQKVTLMMDGSSRRHGDAPFKDPNSSFKKRTGEMNIAAGCPVVAQ 540

OY 540 TVLENGTYIKDDTFIKYIVTSDLPDP 567

DB 541 TVLENGTYIKDDTFIKYIVTSDLPDP 568

RESULT 6

ID AAW27428 standard; Protein: 690 AA.

XX AC AAW27428:

XX DT 27-MAR-1998 (first entry)

XX CC Human CRAF1-b (TRAF-3-p70) polypeptide.

XX KW CD40 receptor associated factor 1; CRAF1-b; TRAF-3; p70; human;

XX KW CD40 mediated intracellular signalling; organ rejection; allergy;

XX KW hay fever; autoimmune disease; systemic lupus erythematosus;

XX KW rheumatoid arthritis; myasthenia gravis; Graves' disease;

XX KW idiopathic thrombocytopenia purpura; haemolytic anaemia;

XX KW diabetes mellitus; psoriasis; spondylarthritis; Lyme disease; HIV;

XX KW apoptosis; Reiter's syndrome; spondylarthritis; Lyme disease; HIV;

XX KW syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;

XX KW pneumoconiosis; adult respiratory distress syndrome; pneumonitis;

XX KW asbestosis; silicosis; Farmer's lung; hepatitis; cirrhosis;

XX KW glomerulosclerosis; multiple sclerosis; glomerulonephritis;

XX KW endocarditis; leprosy; malaria; Goodpasture's disease;

XX KW Henoch-Schoenlein purpura; polyarteritis; multiple myeloma;

XX KW Wegener's granulomatosis; cryoglobulinemia;

XX KW AIDS; oesophageal dysmotility; inflammatory bowel disease;

XX KW Burkitt's lymphoma; nasopharyngeal carcinoma; pneumonia;

XX KW gene therapy; diagnosis.

XX OS Homo sapiens.

XX FH Key location/Qualifiers

XX FT Domain 52..122

XX FT /label= "CRAF-b domain

XX FT /note= "Claim 1"

XX FT Region 239..263

XX FT /note= "zinc finger 1 (Zn binding to Cys-239,

| | | | |
|----------|---|---|-----|
| Db | 123 | MESSKMDSPGALQTNPLKLTHTRSAGTVPFVPEQGGYKEKFKVKTVEEKYKCEKCHLYL | 182 |
| QY | 60 | CNRKQTECHGRCEECMAALLSSSSPCTACQESIIRKDVFNPDNCKREPLIALOYQANE | 119 |
| Db | 183 | CSPRQEGCHGRCEECMAALLSSSSPCTAQESIVKDKVFKNCKREPLIALQYICNE | 242 |
| QY | 120 | GRCAQGLTLGLHLVHLNKECOFELPCLADCKEKLKRDLDHNEKACKREATCSHC | 179 |
| Db | 243 | SRCAQGLTLGLHLVHLNKDCHFEELFCVPRDCKEKLKRDLDHNEKACKREATCSHC | 302 |
| QY | 180 | KSGVPMLKQLQKHEDTDCPCVYVSCPHKCSVOTLLRSELSAHSECVNASTCSEFRIGCV | 235 |
| Db | 303 | KSGVPMLALQKHEDTDCPCVYVSCPHKCSVOTLLRSELSAHSECVNASTCSEFRIGCV | 362 |
| QY | 240 | FQGTNOQITAHASASAVQHVNLKEMSNLEKYSYLLQNESVKKNSIOSLHNQCSFEI | 299 |
| Db | 363 | FOGTNOQITAHASASAVQHVNLKEMSNLEKYSYLLQNESVKKNSIOSLHNQCSFEI | 422 |
| QY | 300 | EIERQKEMLRNNESKILHLQVYVISOAEKLELDEKLEIRPPRONWEPADESMKSYESLQNR | 358 |
| Db | 423 | EIERQKEMLRNNESKILHLQVYVISOAEKLELDEKLEIRPPRONWEPADESMKSYESLQNR | 488 |
| QY | 360 | VTELESEVDKSAGOARNLTGLLESQLSRHDDTSLVHDIRLADMDLRFOYLETASYNGVLIW | 419 |
| Db | 483 | VTELESEVDKSAQVARNRNTGLLESQLSRHDDQMLSVHDIRLADMDLRFOYLETASYNGVLIW | 542 |
| QY | 420 | KINDYRRRQEAVMGKLTSLISQPPYTGFGYKKACARVYLINGDGMGKTHLSLFPVIMRG | 479 |
| Db | 543 | KINDYRRRQEAVMGKLTSLISQPPYTGFGYKKACARVYLINGDGMGKTHLSLFPVIMRG | 602 |
| QY | 480 | EYVALLPWPFPKQVLTMLMDGSSSRHLGDAFPDPNSSSEFKKPGEMNIIASGCPVFYAO | 539 |
| Db | 603 | EYVALLPWPFPKQVLTMLMDGSSSRHLGDAFPDPNSSSEFKKPGEMNIIASGCPVFYAO | 662 |
| QY | 540 | TVLENGTYIKDDTIIFIKYIVDTSLDPP | 567 |
| Db | 663 | TVLENGTYIKDDTIIFIKYIVDTSLDPP | 690 |
| RESULT 7 | | | |
| AAW03146 | ID | AAW03146 standard; Protein; 568 AA. | |
| XX | AAW03146; | | |
| AC | | | |
| XX | | | |
| DT | 23-OCT-1996 | (first entry) | |
| XX | | | |
| DE | | LMP1 associated protein LMP1. | |
| XX | | | |
| KW | LMP1, LMP1 associated protein 1; latent infection membrane protein; | | |
| KW | tumour necrosis factor receptor associated factor; TRAF; | | |
| KW | signal transduction; TNF; TNFR; lymphoblast; tumorigenesis; AIDS; | | |
| KW | Hodgkin's disease; Burkitt's lymphoma; nasopharyngeal carcinoma; | | |
| KW | mononucleosis; Epstein-Barr virus; EBV; therapy. | | |
| OS | Homo sapiens. | | |
| XX | | | |
| FH | Key | Location/Qualifiers | |
| FT | Domain | 245..568 | |
| FT | | /label= LMP1-Binding_domain | |
| FT | Domain | 309..341 | |
| FT | | /label= Coiled_coil_domain | |
| FT | Domain | 406..568 | |
| FT | | /label= Carboxy-terminal domain | |
| XX | | | |
| PN | MO9620723-A1. | | |
| XX | | | |
| PD | 11-JUL-1996. | | |
| XX | | | |
| PF | 28-DEC-1995; | 95MO-US16980. | |
| XX | | | |
| PR | 30-DEC-1994; | 94US-0367540. | |
| XX | | | |


```

QY 180 KQVPMIKLQKHEDTDCPCVVVSCPHKCSVQTLRLSELSEHLSSECVNAPSTCSEFRKRGCV 239
    |||||
DB 180 KQVPMIALQKHEDTDCPCVVVSCPHKCSVQTLRLSELSEHLSSECVNAPSTCSEFRKRGCV 239
QY 240 FQGTNQOIKAHHEASSAVQHVNLKEMNSLSEKRVSLQNESVEKKSQSLSLHNOICSEFI 299
    |||||
DB 240 FQGTNQOIKAHHEASSAVQHVNLKEMNSLSEKRVSLQNESVEKKSQSLSLHNOICSEFI 299
QY 300 EIEROKEMLRNNESEKILHLQRYIDSOAEKLELDEKIRPFROMWEADSMKSSVESLQNR 359
    |||||
DB 300 EIEROKEMLRNNESEKILHLQRYIDSOAEKLELDEKIRPFROMWEADSMKSSVESLQNR 359
QY 360 VTELESVDKSAQOAAANTGLESQLSRHDQTLVSHDIRLADMDLRFQVLETAASYNGVLIM 419
    |||||
DB 360 VTELESVDKSAQOAAANTGLESQLSRHDQTLVSHDIRLADMDLRFQVLETAASYNGVLIM 419
QY 420 KIRDYKRRKQEAVMGKTLSTLSQPYTGYFGYKMCARYLNGDGKGTHTLSLFFVIMRG 479
    |||||
DB 420 KIRDYKRRKQEAVMGKTLSTLSQPYTGYFGYKMCARYLNGDGKGTHTLSLFFVIMRG 479
QY 480 EYDALLPMPFKQVTLMLMDQSSRRHGDAPKPPDNSSFFKPTGEMNITASGCPVFAQ 539
    |||||
DB 480 EYDALLPMPFKQVTLMLMDQSSRRHGDAPKPPDNSSFFKPTGEMNITASGCPVFAQ 539
QY 540 TVLENGTYIKDDTIFIKVIYDTSLLPDP 567
    |||||
DB 540 TVLENGTYIKDDTIFIKVIYDTSLLPDP 567

```

RESULT 9

AAR99259 standard; Protein: 567 AA.

AAR99259;

06-DEC-1996 (first entry)

Full-length CD40 binding protein.

CD40 binding protein; CD40bp; immunosuppressive; immune disorder; antibody; therapy.

Homo sapiens.

Location/Qualifiers

/label= RING_finger_domain

/label= Coiled-coil_domain

W09628568-A1.

19-SEP-1996.

24-MAY-1995; 95WO-US06623.

13-MAR-1995; 95US-0404832.

(UNMI) UNIV MICHIGAN.

Dixit VM;

WPI; 1996-433838/43.

N-PSDB; AAT35251.

New isolated CD40 receptor binding protein - used to develop prods.

for use as immunosuppressive drugs and to treat immune disorders

Example 5; Page 41-43; 65pp; English.

A novel human CD40 receptor binding protein (CD40bp) (AAR99259) has

the ability to bind the cytoplasmic region of the CD40 receptor.

Its amino acid sequence was deduced from a cDNA clone (AAT35251)

CC obtd. from a human B-cell cDNA expression library using a yeast
 CC two-hybrid system. Recombinant CD40bp can be produced in
 CC prokaryotic or eukaryotic host cells. It can be utilized in the
 CC purification of CD40 receptors or the detection CD40 in cell or
 CC tissue samples. It is also useful as an immunogen for prodn. of
 CC anti-CD40bp antibodies, and can be used in an in vitro assay
 CC system to screen for immunosuppressant drugs.

SQ Sequence 567 AA;

Query Match 95.28; Score 2849; DB 17; Length 567;

Best Local Similarity 95.4%; Pred. No. 6, 3e-229;

Matches 542; Conservative 7; Mismatch 17; Indels 2; Gaps 2;

```

QY 1 MESKKMDAAGTLOPNPLKLODRGGS-VLVEGGYGEKRVKVEKKEKCRIVL 59
    |||||
DB 1 MESKKMDSPALDTNPLKLTDRSGVTFVPEGGYGEKRVKVEKKEKCHLV 60
QY 60 CNPKQTEGHRFCESCAALLSSSPKCTACQESI IKDKVKNCKKRETLAQVCRNE 119
    |||||
DB 61 CSRKQTEGHRFCESCAALLSSSPKCTACQESI YKDKVKNCKKRETLAQVCRNE 120
QY 120 GRGCAEQLTGLHVLHLKNCQFEELPCLRADCKEYLRKDLRDHYEAKCTREATCSHC 179
    |||||
DB 121 SRGCAEQLMGLH-LVHLKNCQHFEEELPCVRDCKEYLRKDLRDHYEAKCTREATCSHC 179
QY 180 KQVPMIKLQKHEDTDCPCVVVSCPHKCSVQTLRLSELSEHLSSECVNAPSTCSEFRKRGCV 239
    |||||
DB 180 KQVPMIALQKHEDTDCPCVVVSCPHKCSVQTLRLSELSEHLSSECVNAPSTCSEFRKRGCV 239
QY 240 FQGTNQOIKAHHEASSAVQHVNLKEMNSLSEKRVSLQNESVEKKSQSLSLHNOICSEFI 299
    |||||
DB 240 FQGTNQOIKAHHEASSAVQHVNLKEMNSLSEKRVSLQNESVEKKSQSLSLHNOICSEFI 299
QY 300 EIEROKEMLRNNESEKILHLQRYIDSOAEKLELDEKIRPFROMWEADSMKSSVESLQNR 359
    |||||
DB 300 EIEROKEMLRNNESEKILHLQRYIDSOAEKLELDEKIRPFROMWEADSMKSSVESLQNR 359
QY 360 VTELESVDKSAQOAAANTGLESQLSRHDQTLVSHDIRLADMDLRFQVLETAASYNGVLIM 419
    |||||
DB 360 VTELESVDKSAQOAAANTGLESQLSRHDQTLVSHDIRLADMDLRFQVLETAASYNGVLIM 419
QY 420 KIRDYKRRKQEAVMGKTLSTLSQPYTGYFGYKMCARYLNGDGKGTHTLSLFFVIMRG 479
    |||||
DB 420 KIRDYKRRKQEAVMGKTLSTLSQPYTGYFGYKMCARYLNGDGKGTHTLSLFFVIMRG 479
QY 480 EYDALLPMPFKQVTLMLMDQSSRRHGDAPKPPDNSSFFKPTGEMNITASGCPVFAQ 539
    |||||
DB 480 EYDALLPMPFKQVTLMLMDQSSRRHGDAPKPPDNSSFFKPTGEMNITASGCPVFAQ 539
QY 540 TVLENGTYIKDDTIFIKVIYDTSLLPDP 567
    |||||
DB 540 TVLENGTYIKDDTIFIKVIYDTSLLPDP 567

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RESULT 10

AAW27432 standard; Protein: 543 AA.

AAW27432;

27-MAR-1998 (first entry)

Human CRAF1 isoform p55del9.

CC CD40 receptor associated factor 1; CRAF1-a; TRAF-3; p55; human;
 CC CD40 mediated intracellular signalling; organ rejection; allergy;
 CC may fever; autoimmune disease; systemic lupus erythematosus;
 CC rheumatoid arthritis; myasthenia gravis; Graves' disease;
 CC idiopathic thrombocytopenia purpura; haemolytic anaemia;
 CC diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome;
 CC apoptosis; Rietter's syndrome; spondyloarthritis; Lyme disease; HIV;
 CC syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;

| xx | Sequence | 543 AA; | 91.0%; | Score 2726; | DB 18; | Length 543; |
|--------------|--|--|----------------|---------------------|---------|-------------|
| Qy | Query Match | | 91.7%; | Pred. No. 1,1e-219; | | |
| Db | Best Local Similarity | | 91.7%; | Pred. No. 1,1e-219; | | |
| Matches 521; | Conservative | 7; | Mismatches 14; | Indels 26; | Gaps 2; | |
| Qy | 1 | MESSKMDAAGLQNPPLKLPDQDGS-VLVPPOGGYKKEFVTKVEYKCECRVL | 59 | | | |
| Db | 1 | MESSKMDAAGLQNPPLKLPDQDGS-VLVPPOGGYKKEFVTKVEYKCECRVL | 60 | | | |
| Qy | 60 | CNPKQTEGHRFCESCMALLSSSSPKCTACQESITKQVFENQCKREILALQVYCRNE | 119 | | | |
| Db | 61 | CSPKQTEGHRFCESCMALLSSSSPKCTACQESITKQVFENQCKREILALQVYCRNE | 120 | | | |
| Qy | 120 | GRGCAEQITLGLHLVHLNNECOFELLPCLRADCKEKVLRKDLRDHYEAKCKREATCSHC | 179 | | | |
| Db | 121 | SRGCAEQITLGLHLVHLNNECOFELLPCLRADCKEKVLRKDLRDHYEAKCKREATCSHC | 180 | | | |
| Qy | 180 | KSOVPMILQKHEDPDCVYVSCPHKCSVQTLRSELSAHLSECVNAPSTCSFKRYGCV | 239 | | | |
| Db | 181 | KSOVPMILQKHEDPDCVYVSCPHKCSVQTLRSELSAHLSECVNAPSTCSFKRYGCV | 217 | | | |
| Qy | 240 | FOGTNQOIKAHBASSAVOHVNLKWKMSLSLEKVSLLQNESYEKNKSISTQSLHNOICFEI | 299 | | | |
| Db | 218 | --GTNQOIKAHBASSAVOHVNLKWKMSLSLEKVSLLQNESYEKNKSISTQSLHNOICFEI | 275 | | | |
| Qy | 300 | EIERQKEMLRNNESEITLHORYIDSOAEKELDKETIRPFRRQNEBADSMSVSLSQNR | 359 | | | |
| Db | 276 | EIERQKEMLRNNESEITLHORYIDSOAEKELDKETIRPFRRQNEBADSMSVSLSQNR | 335 | | | |
| Qy | 360 | VTELESVDKSAQQAARNTGLESQLSRRDQTLVSHDIRLADMDFRQVLETASVNGVLT | 419 | | | |
| Db | 336 | VTELESVYKSAQVARNNTGLESQLSRRDQTLVSHDIRLADMDFRQVLETASVNGVLT | 395 | | | |
| Qy | 420 | KIRIDYKRRKQRAVNMKTLSTLYSQPYTCYFGYKMCARVYLINDGNGKGTHTLSLFVYIMRG | 479 | | | |
| Db | 396 | KIRIDYKRRKQRAVNMKTLSTLYSQPYTCYFGYKMCARVYLINDGNGKGTHTLSLFVYIMRG | 455 | | | |
| Qy | 480 | EYDALLPMPFKOKVYTLMLMDGSSRRHNGDAFKPDPNSSFEEKPTGEMNINASGCPVFAO | 539 | | | |
| Db | 456 | EYDALLPMPFKOKVYTLMLMDGSSRRHNGDAFKPDPNSSFEEKPTGEMNINASGCPVFAO | 515 | | | |
| Qy | 540 | TVLENGTYIKRDTIFIKIYIVDTSDLPDP | 567 | | | |
| Db | 516 | TVLENGTYIKRDTIFIKIYIVDTSDLPDP | 543 | | | |
| RESULT 11 | | | | | | |
| AAW27433 | | | | | | |
| ID | AAW27433 | standard; | Protein: | 665 | AA. | |
| XX | AAW27433; | | | | | |
| DT | 27-MAR-1998 | (first entry) | | | | |
| DE | Human CRAF1-b isoform p70del9. | | | | | |
| KX | CD40 receptor associated factor 1; CRAF1-b; TRAF-3; p70; human; | | | | | |
| KX | CD40 mediated intracellular signaling; organ rejection; allergy; | | | | | |
| KX | hay fever; autoimmune disease; systemic lupus erythematosus; | | | | | |
| KX | rheumatoid arthritis; myasthenia gravis; Graves' disease; | | | | | |
| KX | idiopathic thrombocytopenia purpura; haemolytic anaemia; | | | | | |
| KX | diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome; | | | | | |
| KX | apoptosis; Riecher's syndrome; spondyloarthritis; Lyme disease; HIV; | | | | | |
| KX | syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis; | | | | | |
| KX | pneumocystosis; adult respiratory distress syndrome; pneumonitis; | | | | | |
| KX | abescessos; silicosis; Farmer's lung; hepatitis; cirrhosis; | | | | | |
| KX | atherosclerosis; multiple sclerosis; glomerulonephritis; | | | | | |
| KX | glomerulonephritis; glomerulopathy; kidney disease; nephropathy; | | | | | |
| KX | endocarditis; leprosy; malaria; Goodpasture's disease; | | | | | |
| KX | Henoch-Schoenlein purpura; polyarthritis; multiple myeloma; | | | | | |
| KX | Wegener's granulomatosis; cryoglobulinemia; | | | | | |

KW Waldenstrom's macroglobulinaemia; amyloidosis; Sjogren's syndrome;
 KW AIDS; oesophageal dysmotility; inflammatory bowel disease;
 KW bladder disease; Epstein-Barr virus; mononucleosis; B cell tumour;
 KW Burkitt's lymphoma; nasopharyngeal carcinoma; pneumonia;
 KW gene therapy; diagnosis.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Domain 52..122
 FT /label= "CRAF-b domain
 FT /note= "Clalm 1"
 FT Region 239..263
 FT /note= "zinc finger 1 (zn binding to Cys-239,
 FT Cys-246, His-258 and Cys-263)"
 FT Region 270..292
 FT /note= "zinc finger 2 (zinc binding to Cys-270,
 FT Cys-275, His-287 and Cys-292 "
 FT Region 299..319
 FT /note= "zinc finger 3 (zn binding to Cys-299,
 FT Cys-302, His-314 and Cys-319"
 FT Binding-site 16..19
 FT /note= "putative SH3 binding motif"
 FT Binding-site 44..47
 FT /note= "putative SH3 binding motif"
 FT Binding-site 103..110
 FT /note= "putative SH3 binding motif"
 XX
 XX WO9734473-A1.
 XX
 XX 25-SEP-1997.
 XX
 XX 21-MAR-1997; 97MO-US05076.
 XX
 XX 18-SEP-1996; 96US-0026584.
 XX 21-MAR-1996; 96US-0013820.
 XX 01-MAY-1996; 96US-0016626.
 XX 01-MAY-1996; 96US-0016659.
 XX
 XX (UYCO) UNIV COLUMBIA NEW YORK.
 XX
 XX Cleary AM, Frank DM, Lederman S;
 XX
 XX WPI; 1997-47907/44.
 XX
 XX N-PSDB; AAT90123.
 XX
 XX Protein comprising CRAF1-b domain capable of inhibiting CD40
 XX mediated cell activation - useful to treat conditions characterised
 XX by aberrant or unwanted level of CD40 mediated intracellular
 XX signalling
 XX
 XX Example 1; Fig 1A-O; 158pp; English.
 XX
 CC This polypeptide comprises a CRAF1 (TRAF-3) protein designated
 CC p10del19 that is encoded by exons 1-2, 4-8 and 10-13 of the human
 CC CRAF gene (see AAT90123). Different isoforms (AAW27428-37) of CRAF1
 CC have been identified that arise from alternative splicing. CRAF1
 CC peptides comprising from 0-4 zinc finger domains, and nucleic acids
 CC encoding them, can be used to inhibit CD40 ligand activation of
 CC cells that express CD40 on their surface, particularly by
 CC introducing the nucleic acid molecule into the cells, and used to
 CC treat conditions characterised by an aberrant or unwanted level of
 CC CD40 mediated intracellular signalling, such as organ rejection, or
 CC a CD40 dependent immune response in a subject receiving gene
 CC therapy. The condition may be an allergic response or an
 CC autoimmune response, or may be dependent on CD40 ligand-induced
 CC activation of epithelial cells, an inflammatory kidney disease, a
 CC smooth muscle cell-dependent disease, or a condition associated
 CC with Epstein-Barr virus.
 XX
 XX Sequence 665 AA;
 XX
 XX Query Match 91.0%; Score 2726; DB 18; Length 665;

Best Local Similarity 91.7%; Pred. No. 1,5e-218;
 Matches 521; Conservative 7; Mismatches 14; Indels 26; Gaps 2;
 QY 1 MESSKMDAGTLQNPPLKLPDRGAS-VLVBGGYKKEFYKYEDKCKCKKLYL 59
 DB 123 MESSKMDSPCALQNPPLKLTDRSAGTPVFVEGGGKKEFYKYEDKCKCKKLYL 182
 QY 60 CNPKTEGCHRCPCSMALLSSSSPKTACQESTIKKVKFNDCKREIILQVCRNE 119
 DB 193 CSPKTEGCHRCPCSMALLSSSSPKTACQESTIKKVKFNDCKREIILQVCRNE 242
 QY 120 GRGCAEQLTGLHVLHNLNCOFELPCILADCKEYLRKDLRPHVEKACKYREATCSHC 179
 DB 243 SRGCAEQLTGLHVLHNLNCOFELPCILADCKEYLRKDLRPHVEKACKYREATCSHC 302
 QY 180 KSOVPMKLOKHEDPDCVYVSCCHKKSVOYTLRSELSEHLSECVANPSCSKRRGCV 239
 DB 303 KSOVPMKLOKHEDPDCVYVSCCHKKSVOYTLRSELSEHLSECVANPSCSKRRGCV 339
 QY 240 FGSTNQOIKAHFASAVOHVNLKEMSNLEKVSILQNESVEKKSIOSLHNOICSEFI 299
 DB 340 --GTMOQIKAHFASAVOHVNLKEMSNLEKVSILQNESVEKKSIOSLHNOICSEFI 397
 QY 300 EIERQKEMLRNNEKILHLQRYIDSQAEKLELKEIRPFQONNEADSMKSVSYSIQNR 359
 DB 398 EIERQKEMLRNNEKILHLQRYIDSQAEKLELKEIRPFQONNEADSMKSVSYSIQNR 457
 QY 360 VTELESVDKSAQAARNGLLESQLSRRDQTLVSVDIFLAMDILRFQVLEFASVNGVLIW 419
 DB 458 VTELESVDKSAQAARNGLLESQLSRRDQTLVSVDIFLAMDILRFQVLEFASVNGVLIW 517
 QY 420 KIRDKRRKQEVAMGKTSLXSOPPYTGFGYKMCARYLNGDGGKCTHLSLFEVIMRG 479
 DB 518 KIRDKRRKQEVAMGKTSLXSOPPYTGFGYKMCARYLNGDGGKCTHLSLFEVIMRG 577
 QY 480 EYDALLPMPFKOKVTLMMDGSSRRHLGDAFKPPNNSRRKPPGEMNITASGCPVYVAQ 539
 DB 578 EYDALLPMPFKOKVTLMMDGSSRRHLGDAFKPPNNSRRKPPGEMNITASGCPVYVAQ 637
 QY 540 TVLENGTYIKDDTIFIKVYVDFSDLPDP 567
 DB 638 TVLENGTYIKDDTIFIKVYVDFSDLPDP 665
 RESULT 12
 AAR98833
 ID AAR98833 standard; Protein: 543 AA.
 XX
 XX AAR98833:
 XX
 XX 23-MAR-1998 (first entry)
 XX
 DE CD40 associated protein (CAP)-1.
 XX
 KW CD40 associated protein; CAP; agonist; antagonist; gene therapy;
 KW cell proliferation; treatment; cancer; autoimmune disease.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Domain 53..91
 FT /note= "RING finger domain"
 FT Domain 117..141
 FT /note= "zinc finger domain 1"
 FT Domain 148..170
 FT /note= "zinc finger domain 2"
 FT Domain 177..197
 FT /note= "zinc finger domain 3"
 FT Domain 384..540
 FT /note= "TRAF domain"
 XX
 XX WO9616665-A1.
 XX
 XX

PT mediated cell activation - useful to treat conditions characterised
PT by aberrant or unwanted level of CD40 mediated intracellular
PT signalling

XX Example 1; Fig 1A-O; 158bp; English.

XX This polypeptide comprises a CRAFI (TRAF-3) protein designated
CC p70del8.9 that is encoded by exons 1-2, 4-7 and 10-13 of the human
CC CRAFI gene (see AAT90123). Different isoforms (AAW27428-37) of CRAFI
CC have been identified that arise from alternative splicing. CRAFI
CC peptides comprising from 0-4 zinc finger domains, and nucleic acids
CC encoding them, can be used to inhibit CD40 ligand activation of
CC cells that express CD40 on their surface, particularly by
CC introducing the nucleic acid molecule into the cells, and used to
CC treat conditions characterised by an aberrant or unwanted level of
CC CD40 mediated intracellular signalling, such as organ rejection, or
CC a CD40 dependent immune response in a subject receiving gene
CC therapy. The condition may be an allergic response or an
CC autoimmune response, or may be dependent on CD40 ligand-induced
CC activation of epithelial cells, an inflammatory kidney disease, a
CC smooth muscle cell-dependent disease, or a condition associated
CC with Epstein-Barr virus.

XX Sequence 516 AA:

Query Match 85.5%; Score 2558.5; DB 18; Length 516;
Best Local Similarity 87.0%; Pred. No. 9.7e-205;
Matches 494; Conservative 7; Mismatches 14; Indels 53; Gaps 2;

QY 1 MESSKKMDAAAGTLPNPPLKLPDRGAGS-VLVEGOGYKEKFKVTEDEKCKEGRVLI 59
DB 1 MESSKKMDSPGALQTNPLKLTDRSAGPVEFGOGYKEKFKVTEDEKCKEGRVLI 60
QY 60 CNKQTECGHRCFSCCAALSSSPKCTACQESIIKDKYKCNCKRETLAQVYCRNE 119
DB 61 CSPEQTECGHRCFSCCAALSSSPKCTACQESIVKDKYKCNCKRETLAQVYCRNE 120
QY 120 GRCGAEDLTGLHLVHLKNECOFEELPCLRADKEKVKRLDRDHEKACKYREATCSHC 179
DB 121 SRGGAEDLTGLHLVHLKNECOFEELPCLRADKEKVKRLDRDHEKACKYREATCSHC 180
QY 180 KSOVPMATLOKHEDTPCPCVAVSCPHKCSVOTLLRSELSAHLSCEVNADEPSTCSFKRYGCV 239
DB 181 KSOVPMATLOKHEDTPCPCVAVSCPHKCSVOTLLRSELSAHLSCEVNADEPSTCSFKRYGCV 239
QY 240 FQGNQOIKAHSAVAOHVNLKEMSNLEKKVSLQNSVEKNSIOSLHNOICSPFI 299
DB 190 -QGTNOOIKAHSAVAOHVNLKEMSNLEKKVSLQNSVEKNSIOSLHNOICSPFI 248
QY 300 EIEROKEMLNNSKILHQRVIDSOAEKLELDEKEIRPFRQWMEBADSXKSSVESLQNR 359
DB 249 EIEROKEMLNNSKILHQRVIDSOAEKLELDEKEIRPFRQWMEBADSXKSSVESLQNR 308
QY 360 VTELESYDKSAGAAANTGLLESQLSRHQDTLSVHDIRLADMRLRQVLETASYNGLTW 419
DB 309 VTELESYDKSAGAAANTGLLESQLSRHQDTLSVHDIRLADMRLRQVLETASYNGLTW 368
QY 420 KIRDYKRRKQEAVMGKTLISYQPEYTGFGYKMCARVYLNGGCKGTHLSLFEVIMRG 479
DB 369 KIRDYKRRKQEAVMGKTLISYQPEYTGFGYKMCARVYLNGGCKGTHLSLFEVIMRG 428
QY 480 EYDALLPMPFKOKVTLMIMOGSSRRHLGDAFKPDNNSSEFKKPTGEMNIASGCPVFAVO 539
DB 429 EYDALLPMPFKOKVTLMIMOGSSRRHLGDAFKPDNNSSEFKKPTGEMNIASGCPVFAVO 488
QY 540 TVLENGTYIKDPTIFIKVIYDTSLDLDP 567
DB 489 TVLENGTYIKDPTIFIKVIYDTSLDLDP 516

RESULT 14
AAW27437
ID AAW27437 standard; Protein; 638 AA.

XX AAW27437;
AC 27-MAR-1998 (first entry)
XX
XX
DE Human CRAFI-b isoform p70del8.9.
XX

KW CD40 receptor associated factor 1; CRAFI-b; TRAF-3; p70; human;
KW CD40 mediated intracellular signalling; organ rejection; allergy;
KW hay fever; autoimmune disease; systemic lupus erythematosus;
KW rheumatoid arthritis; myasthenia gravis; Graves' disease;
KW idiopathic thrombocytopenia purpura; haemolytic anaemia;
KW diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome;
KW apoptosis; Rieger's syndrome; spondyloarthritis; Lyme disease; HIV;
KW syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;
KW pneumoconiosis; adult respiratory distress syndrome; pneumonitis;
KW asbestosis; silicosis; Farmer's lung; hepatitis; cirrhosis;
KW atherosclerosis; multiple sclerosis; glomerulonephritis;
KW glomerulosclerosis; glomerulopathy; kidney disease; nephropathy;
KW endocarditis; leprosy; malaria; Goodpasture's disease;
KW Henoch-Schoenlein purpura; polyarteritis; multiple myeloma;
KW Wegener's granulomatosis; cryoglobulinemia;
KW Waldenstrom's macroglobulinemia; amyloidosis; Sjogren's syndrome;
KW AIDS; oesophageal dysmotility; inflammatory bowel disease;
KW bladder disease; Epstein-Barr virus; mononucleosis; B cell tumour;
KW Burkitt's lymphoma; nasopharyngeal carcinoma; pneumonia;
KW gene therapy; diagnosis.

OS Homo sapiens.

Key Location/Qualifiers
FH 52..122
FT Domain /label= "CRAFI-b domain"

FT Region /note= "Claim 1"
FT 239..263
FT /note= "zinc finger 1 (2n binding to Cys-239,
FT Cys-246, His-258 and Cys-263)."

FT Region /note= "zinc finger 2 (zinc binding to Cys-270,
FT Cys-275, His-287 and Cys-292"

FT Binding-site /note= "putative SH3 binding motif"
FT 16..19
FT /note= "putative SH3 binding motif"

FT Binding-site /note= "putative SH3 binding motif"
FT 44..47
FT /note= "putative SH3 binding motif"

FT Binding-site /note= "putative SH3 binding motif"
FT 103..110
FT /note= "putative SH3 binding motif"

PN WO9734473-A1.

PD 25-SEP-1997.

PE 21-MAR-1997; 97WO-US05076.

PF 18-SEP-1996; 96US-0026584.

PR 21-MAR-1996; 96US-0013820.

PR 01-MAY-1996; 96US-0016626.

PR 01-MAY-1996; 96US-0016659.

PA (UTCO) UNIV COLUMBIA NEW YORK.

PI Cleary AM, Frank DM, Lederman S;

DR WPI: 1997-479907/44.

DR N-P8DB; AAT90123.

XX Protein comprising CRAFI-b domain capable of inhibiting CD40
XX mediated cell activation - useful to treat conditions characterised
XX by aberrant or unwanted level of CD40 mediated intracellular
XX signalling

XX Example 1; Fig 1A-O; 158bp; English.
PS This polypeptide comprises a CRAFI (TRAF-3) protein designated

CC and used to treat conditions characterised by an aberrant or
 CC unwanted level of CD40 mediated intracellular signalling, such as
 CC organ rejection, or a CD40 dependent immune response in a subject
 CC receiving gene therapy. The condition may be an allergic response
 CC or an autoimmune response, or may be dependent on CD40 ligand-
 CC induced activation of epithelial cells, an inflammatory kidney
 CC disease, a smooth muscle cell-dependent disease, or a condition
 CC associated with Epstein-Barr virus.

XX
 SQ Sequence 512 AA;

Query Match

85.3%; Score 2552.5; DB 18; Length 512;

Best Local Similarity 86.3%; Pred. No. 3e-204;

Matches 490; Conservative 7; Mismatches 14; Indels 57; Gaps 2;

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QY 1 MESSKKMDAAGTLPNPPLKLPDRGAGS-VLVPDGGYKKEFYKTVEDKYKCEKRLVL 59
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 1 MESSKKMDSPGALQTNPPKLHTDRSAGTPVFPDGGYKKEFYKTVEDKYKCEKRLVL 60
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 60 CNPKQTEGHRFCESCMALLSSSPKCTACQESTIKKVFKNCKKREITLALOYCRNE 119
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 61 CSPKQTEGHRFCESCMALLSSSPKCTACQESTIKKVFKNCKKREITLALOYCRNE 120
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 120 GRCGAELTLGHLVHLNKEOFELPCLRADCKEVLKDLRDHVEKACKYREATCSHC 179
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 121 SRGCAEQTLGHLVHLNKEOFELPCLRADCKEVLKDLRDHVEKACKYREATCSHC 180
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 180 KSQVPMIKLQKHEDTDCPCVYVSCPHKCSVOTLLKSELSAHLSECVNAPSTCSFKRYGCV 239
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 181 KSQVPMIALQKHEDTDCPCVYVSCPHKCSVOTLLKSELSAHLSECVNAPSTCSFKRYGCV 240
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 240 FQGTNOQIKAHFASAVQHVNLKEMSNLSLEKVSLLQNESVEKKNKSTOSLHNQCSFEI 299
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 241 FQGTNOQIKAHFASAVQHVNLKEMSNLSLEKVSLLQNESVEKKNKSTOSLHNQCSFEI 300
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 300 EIEROKEMLRNNEKILHLQRYIDSQAERKELDKERPFQRMWEADSMKSSVESLQNR 359
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 245 EIEROKEMLRNNEKILHLQRYIDSQAERKELDKERPFQRMWEADSMKSSVESLQNR 364
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 360 VTELESVDKSAGQAARNTGLLESQLSRHDQTLVSHDIRLADMDLRFQVLETA SYNGVLIW 419
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 305 VTELESVDKSAGQAARNTGLLESQLSRHDQTLVSHDIRLADMDLRFQVLETA SYNGVLIW 364
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 420 KTRDYKRRKQEA VMGKTLSTYSQPYTGYFGYKMCARVYLNDGKGTHTLSLFPVIMRG 479
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 365 KTRDYKRRKQEA VMGKTLSTYSQPYTGYFGYKMCARVYLNDGKGTHTLSLFPVIMRG 424
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 480 EYDALLPMPFKOKVTLMMDQSSRRHLGDAFKPDPNSSSFKKPTGEMNIIASGCPVFYAO 539
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 425 EYDALLPMPFKOKVTLMMDQSSRRHLGDAFKPDPNSSSFKKPTGEMNIIASGCPVFYAO 484
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 540 TVLENGTYIKDDTIFIKYIVDTSDLPDP 567
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 485 TVLENGTYIKDDTIFIKYIVDTSDLPDP 512
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

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Search completed: December 19, 2002, 15:00:24
 Job time : 40 secs